

What is claimed is:

1. A liquid crystal display device, comprising:

a substrate;

a gate electrode over the substrate;

a first semiconductor layer over the gate electrode;

a second semiconductor layer over the first semiconductor layer;

a first metal layer on the second semiconductor layer, the first metal layer patterned in a same pattern as the second semiconductor layer such that the first metal layer and second semiconductor layer define the separation region; and

source and drain electrodes over the first metal layer, the source and drain electrodes patterned the same as the first metal layer and the second semiconductor layer to define a first upper portion of the separation region, and the source and drain electrodes include a second and a third metal layer.

2. The device of claim 1, further comprising:

an insulating layer in between the gate electrode and the first semiconductor layer;

a protective layer over the source and drain electrodes and defining a second upper portion of the separation region and a contact hole exposing a portion of the drain electrode; and

a pixel electrode in the contact hole.

3. The device of claim 1, wherein;

the second metal layer includes aluminum or an aluminum alloy.

4. The device of claim 1, wherein
the first and third metal layers are formed of the
same material.

5. The device of claim 1, wherein
the first and third metal layers are formed of
different materials.

6. The device of claim 1, wherein
the first and third metal layers include titanium,
tungsten, tantalum, chromium or molybdenum.

7. The device of claim 4, wherein
the first and third metal layers include titanium,
tungsten, tantalum, chromium or molybdenum.

8. A method of forming a liquid crystal display device,
comprising:

forming a gate electrode on a substrate;
forming an active layer over the gate electrode;
forming a first semiconductor layer over the active
layer;

forming a second semiconductor layer over the first
semiconductor layer;

forming a first metal layer over the second
semiconductor layer;

patterning the first metal layer and the second
semiconductor layer in a same pattern; and

forming a source electrode and a drain electrode
over the first metal layer.

9. The method of claim 8, wherein
forming the source and drain electrodes includes
forming a second metal layer over the first metal
layer,
5 forming a third metal layer over the first metal
layer, and
patterning the second and third metal layers in
the same pattern as the first metal layer and second
semiconductor layer in the channel region so that a
10 channel portion of the first semiconductor layer is
exposed.

10. The method of claim 8, wherein
the first metal layer is formed of titanium,
15 tungsten, tantalum, chromium or molybdenum.

11. The method of claim 9, wherein
the first and third metal layers are formed of the
same material.

12. The method of claim 9, wherein
the first and third metal layers are formed of a
different material.

13. The method of claim 9, wherein
the second metal layer is formed of aluminum or an
aluminum alloy.

14. The method of claim 9, wherein
the first and third metal layers are formed of titanium,
20 tungsten, tantalum, chromium or molybdenum.

15. The method of claim 8, wherein
the patterning of the first metal layer and the
second semiconductor layer to define a channel region
includes removing a portion of the first metal layer and
5 second metal layer corresponding to the gate electrode and
exposing the first semiconductor layer.